REMARKS

A final Office Action was mailed January 29, 2008 in the above case. A Notice of Appeal with Pre-Appeal Brief Request for Review was filed June 25, 2008. A Notice of Panel Decision from Pre-Appeal Brief Review was mailed February 2, 2009, setting a due date for response to one month from the date of the Notice, subject to extensions under 37 C.F.R. § 1.136. Claims 1-25 remain rejected under 35 U.S.C. § 103(a) over *Rosen* in view of *Martin*.

Claims 1, 6, 13 and 19 are amended above and new dependent claims 26-28 are added, with no new matter added thereby. Reconsideration of the rejection is requested in view of the above amendments and the following remarks.

A.   <u>Rejection of Claims 1-25 as Obvious Over *Rosen* In View Of *Martin* Under 35 U.S.C. §103(a) Is Addressed</u>.

The rejection of claims 1-25 over *Rosen* in view of *Martin* is respectively traversed.

     1.   <u>Amended Claims 1, 13, and 19 Recite Halt and Resynchronization Processes Neither Taught nor Suggested by *Rosen* or *Martin*</u>

Claim 1 has been amended to recite details of a lockdown and resynchronization process of the present invention, as follows:

> 1.   A distributed trading system for handling a plurality of order requests, each order request comprising parameters under which a participant will buy and/or sell a futures contract, the system comprising:
>
> a messaging bus;
>
> a validator coupled to the messaging bus and having a first interface for receiving order requests, wherein the validator implements processes for validating the order requests, and an interface generating a validated order message on the messaging bus related to validated orders;
>
> a risk allocation value (RAV) component coupled to the messaging bus and having an interface for receiving validated order messages from the validator, wherein the RAV component implements processes for evaluating risk associated with an order should that order be completed and preventing completion on an order in response to the RAV component identifying an unacceptable position;

a match engine coupled to the messaging bus and having an interface for receiving validated acceptable order messages from the RAV component, wherein the match engine implements processes for matching orders based on the order-specified criteria;

a persist component coupled to the messaging bus and having an interface for receiving messages related to orders and trades, wherein the persist component implements processes for persistently storing information related to orders and trades; and

<u>a resynchronization process,</u>

<u>wherein each of the validator, RAV component, match engine and persist component is operative to generate a halt message on the message bus in the event of a malfunction or failure, the halt message causes one or more or all of the validator, RAV component, match engine and persist component of the system to halt, and the resynchronization process is operative to recover from such a system halt and reopen the distributed trading system for the buying and/or selling of futures contracts.</u>

Independent claims 13 and 19 have also been amended to recite similar elements. The advantages of the claimed distributed processing architecture, as developed by the inventors hereof, is that

. . . . failure or malfunction of one instance of one component is unlikely to affect other instances of that same component or instances of different components. In this manner, a badly behaved instance is isolated. In a system in which many thousands of transactions may be pending at any instant, the ability to shut down one or more only a few component instances and restart them is a powerful features.

See published Specification, paragraph [0064]. Note in particular the LOCKDOWN message and 'Resynch" process described at paragraphs [0065]-[0069].

These newly claimed features are neither disclosed nor taught by *Martin* or *Rosen*. For this reason alone, independent claims 1, 13 and 19, and dependent claims 2-12, 14-18 and 20-25 are allowable over the references of record.

2. *Rosen* and *Martin* Fail to Teach or Suggest the "Futures Contract" of Claims 1, 3, 5, 13, 15, 16, 19, 24 and 25 and Incorporated in Dependent Claims 2, 4, 6-12, 14, 17, 18 and 20-23.

A "futures contract" is an exchange-traded derivative which is a standardized contract to buy or sell a quantity of a commodity at a certain date or dates in the future at a price or prices set when the contract is entered into. A clearinghouse typically acts as a counterparty to a futures contract and sets

margin requirements. A settlement price is the official price of a futures contract at the end of a day's trading session on an exchange. The future date may include one or multiple delivery dates, also referred to as settlement date(s), and both parties to a futures contract must settle the futures contract by the settlement date(s). A futures contracts may be referred to as "futures". However, a "futures contract" is not equivalent to a "future contract" or to just any contract having a future effective or completion date and is not conventionally referred to as a "future". Features of a "futures contract" which are typically not present in stock trades are commodity identification, margins and future settlement date(s).

The distributed trading system of independent claim 1 is explicitly limited to processing orders for buying and selling "a futures contract". This limitation gives context and life to the elements of the claim and provides antecedent basis for ensuing claim terms in dependent claims 3, 5 and 6. Independent claim 13 recites the initial method step of "receiving an order request in a first component, wherein the order request specifies parameters under which a participant will buy and/or sell a futures contract." Dependent claims 15 and 16 relate to special futures contract groupings called contract clusters. Likewise system claim 19 is explicitly limited to processing orders for sales of futures contracts and dependent claims 24 and 25 relate to groupings of futures contracts in contract clusters. For each claim grouping on appeal, the preambles provide antecedent basis for ensuing claim terms and give life, meaning and vitality to the claims, with the claims relating exclusively to futures contract trading systems and methods. In accordance with *Eaton Corp. v. Rockwell International Corp.*, 323 F.3d 1332 (Fed. Cir. 2003), the "futures contract" of independent claims 1, 13 and 19 are a limiting feature of all of the pending claims.

The final Office Action mailed January 29, 2008, begins by stating that *Rosen* "discloses a distributed trading system . . . under which a participant will buy and/or sell a futures contract". In responses filed by the Applicant, it has been pointed out that the term "futures" and the phrase "futures contract" are not present anywhere in *Rosen*. The Applicant has even requested an identification of where *Rosen* actually teaches "futures contracts", but without success. Furthermore, *Rosen* also fails to recognize the features of a "futures contract" which impose special requirements upon commodities trading. Nonetheless, the

Examiner has identified no support in *Rosen* for his contention that *Rosen* teaches the buying and selling of futures contracts.

Martin, the secondary reference, is entitled *Trade Allocation* and contains detailed information about trading stocks. *Martin* contains a single reference to rounding options and futures to a whole contract, and otherwise relates only to trading stock lots. Indeed, *Martin* is cited for disclosing how

> . . . . the number of shares determined to be allocated to a particular portfolio and risk class . . . may be derived by multiplying the trade volume by the target ratio for an opening position or the close ratio for the closing position.

This citation fails to teach anything about the claimed futures contracts. For this further reason, independent claims 1, 13 and 19 are patentably distinguishable over the combination of *Rosen* and *Martin*, as are dependent claims 2-12, 14-18 and 20-25 which depend therefrom.

3. *Rosen* and *Martin* Fail to Teach or Suggest the "RAV" Element as Claimed in Independent Claims 1, 13 and 19.

The final Office Action of January 29, 2008 at page 2, paragraph 2, starting at line 11, admits that **U.S. Patent No. 6,049,784 to *Rosen* "fails to explicitly teach" the following elements from independent claim 1:**

> a risk allocation value (RAV) component coupled to the messaging bus and having an interface for receiving validated order messages from the validator, wherein the RAV component implements processes for evaluating risk associated with an order should that order be completed and preventing completion on an order in response to the RAV component identifying an unacceptable position;
>
> a match engine coupled to the messaging bus and having an interface for receiving validated acceptable order messages from the RAV component, wherein the match engine implements processes for matching orders based on the order-specified criteria; and
>
> a persist component coupled to the messaging bus and having an interface for receiving messages related to orders and trades, wherein the persist component implements processes for persistently storing information related to orders and trades.

Corresponding elements are also present in independent claims 13 and 19, and so the Examiner's admission also applies to independent claims 13 and 19.

Martin also fails to teach the above combination admitted by the Examiner to be absent from *Rosen.* Instead, *Martin* teaches a computer system which includes a first database that stores data associating securities portfolios with risk classes. *Martin* at col. 1, lines 48-50. A separate order management system sends messages about financial instruments such as **shares of stocks grouped as a lot to be traded**. The order management system includes information about the size of the trade and risk class identifiers for the shares of stock to be traded. *Martin* at col. 1, lines 52-54. *Martin* then teaches a separate trade allocation system which is interfaced with the order management system and the portfolio database and allocates shares being traded based on matching risk class criteria and ratios of the total share lot being traded. *Martin* at col. 1, lines 55-60. In *Martin*, assignment of risk classes to the portfolios and assignment of risk classes to the financial instruments being traded are separately performed functions.

Martin fails to teach that it is these risk allocation processes themselves which implement processing which evaluate risk associated with a futures contract order, should that order be completed. Rather, *Martin* teaches that the order management system identifies a share lot available for trade and the allocation system finds portfolios who risk class can accept the available share lots given the risk classes previously assigned to the portfolios. There is no indication that *Martin* is evaluating risk associated with a futures contract order, should the order be completed with an unacceptable risk, as is claimed.

Instead *Martin* is cited for the following disclosure, how

> . . . . the number of shares determined to be allocated to a particular portfolio and risk class . . . may be derived by multiplying the trade volume by the target ratio for an opening position or the close ratio for the closing position.

It has never been understood by the Applicant how the above statement has anything to do with the RAV element from claim 1 which the Examiner admits *Rosen* fails to teach:

> the RAV component implements processes for evaluating risk associated with an order should that order be completed and preventing completion on an order in response to the RAV component identifying an unacceptable position;

The only explanation given by the Examiner is that it would be obvious to modify *Rosen* to include a risk allocation value component coupled to the messaging bus, wherein the RAV component implements processing for evaluating risk with an order, should that order be completed and preventing completion of an order.

However, what *Martin* is doing is **just allocating shares of stock to portfolios based on risk class**. What is <u>claimed</u> in independent claim 1 and in similar wording in independent claims 13 and 19, is not the allocation of shares among portfolios—it is **the completion or rejection of futures contract orders based on risk**. As is explained above, it is universally known that futures contracts involve far more than the matching of price and quantity of a stock. Futures contracts involve resources, delivery dates, delivery locations, settlement prices and margins, and transactions involving futures contracts are not equivalent to "allocating shares of stock to portfolios".

For the above additional reasons, *prima facie* obviousness of independent claims 1, 13 and 19 of the present case based on the cited combination of *Rosen* in view of *Martin* has not been established. Since dependent claims 2-12, 14-18 and 20-25 include the distinguishing features of independent claims 1, 13 and 19, reversal of the § 103 rejection of claims 1-25 is respectfully requested.

4.   <u>*Rosen* and *Martin* Fail to Teach or Suggest a "Particular Class of Futures Contracts" Recited in Dependent Claims 5 and 24, Also Incorporated in Dependent Claims 6 and 25.</u>

Dependent claim 5 recites the further distinguishing feature of a match engine configured specific for a particular class of futures contracts, which is incorporated through further dependency in claim 6. Dependent claim 24 includes similar limitations which are also incorporated via further dependency in claim 25. In the final Office Action of January 29, 2008, the Examiner states that this feature is shown at <u>"column 8, para 0065-0067 and para 0068-007 and column 9-13 para 00890-0149</u>. Since there is no mention of "futures contracts" anywhere in *Rosen*, for this additional reason, it cannot be seen how *prima facie* obviousness of claims 5 and 24 has been established when these claims recite the patentably distinguishing "match engine . . . configured specifically for a particular class of futures contracts and receives validated order messages only

when they related to the particular class of futures contracts". Reversal of the rejection of dependent claims 5, 6, 24 and 25 is respectfully requested.

5. _Rosen_ and _Martin_ Fail to Teach or Suggest the "Contract Cluster", "Cluster ID" and Simultaneous Consideration of Two or More Contracts of Dependent Claims 6 and 25.

Dependent claim 6 recites the further distinguishing feature relating to when a particular class of futures contracts comprise a contract cluster, and wherein responsive to contract clusters being identified, requiring the match engine to consider two or more contracts simultaneously to determine matches. Dependent claim 25 includes similar recitations. In the January 2008 final Office Action, the Examiner boldly concludes that _Rosen_ "discloses wherein the particular class of futures contracts comprise a contract cluster." However, no support has been found anywhere in _Rosen_ is found for the Examiner's conclusion, with the phrases "contract cluster" and "cluster ID", as defined at page 14, line 13 through page 15, line 27 of the present specification, completely absent from _Rosen._

Contract clusters are groups of contracts that are sufficiently related to allow offers to sell and bids to buy the contracts within a contract cluster to be matched against each other. _See_ Specification, page 15, lines 14-25. One example of a contract cluster is two contracts sharing a spread or strip relationship that requires implied markets be generated between the two markets. _Id._ When contract clustering occurs, a unique identification called the cluster ID is associated with each cluster. _Id._ The present invention configures each component to recognize a particular cluster ID and ignore messages associated with other cluster IDs. _Id._ Thus, when the matching engine considers an order entering into one contract that is identified as being associated with a contract cluster, the match engine reacts as potentially causing a match in two or more contracts. _Id._ The match engine thus considers the two or more contracts simultaneously when determining matches. _Id._

These and other aspects of trading contract clusters are not taught by _Rosen_ or _Martin_. While _Martin_ does teach about grouping shares of stocks to be traded as a lot, such a lot is not a contract cluster in the context of futures contracts and as described in the present specification. There is, for example, no

indication or suggestion that two or more contracts are considered simultaneously when determining matches for a share lot.

For this further reason, dependent claims 6 and 25 are further distinguishable over *Rosen* in view of *Martin,* and reversal of the obviousness rejection of claims 6 and 25 is respectfully requested.

6.   <u>*Rosen* and *Martin* Fail to Teach or Suggest "Proposing a Settlement Price" of Claims 13 and 19, Incorporated Through Dependency in Claims 14-18 and 20-25.</u>

In addition, the Office Action states that *Rosen* fails to explicitly teach numerous steps of claim 13, including steps relating to unmatched orders and "proposing a settlement price for matched orders based on outside trade data." In the context of futures contracts, the term "settlement price" has a particular meaning. Claim 19 recites a similar limitation. Nonetheless, the Office Action then concludes it would have been obvious to modify the teaching of *Rosen* to undertake these same steps, "as taught by *Martin*". However, *Martin* nowhere teaches "proposing a settlement price". As described in detail above, the cited passages from *Martin* relate to allocation of shares of stock or other security among portfolios. There is no teaching about "proposing a settlement price." The combination of *Rosen* and *Martin* fails to either explicitly or inherently teach this step of claim 13 or the similar limitations of independent claim 19, for this additional reason, independent claims 13 and 19 are non-obvious and patentably distinguishable over the combination of *Rosen* and *Martin*. Dependent claims 14-18 and 20-25 are likewise patentable over the combination through dependency.

B.   <u>New Claims 26-28</u>

New claims 26, 27 and 28, depend from independent claims 1, 19, and 13, respectively, and further describe the component monitoring and testing system and method of the present invention. *See paragraph [0067]*. These limitations are neither taught nor suggested by either *Rosen* or *Martin*.

C.   <u>Conclusion</u>

The filing of an Information Disclosure Statement herewith is brought to the Examiner's attention. It is believed that independent claims 1, 13 and 19 and dependent claims 2-12, 14-18 and 20-28 are not only patentably distinguishable

over *Rosen* in view of *Martin*, but also are patentably distinguishable over the references identified in the IDS. Withdrawal of the obviousness rejection of claims 1-25 is therefore respectfully requested.

The applicant hereby petitions for a 2-month extension, to extend the due date for filing a response in this case from March 2, 2009 to May 2, 2009. Please charge Deposit Account No. 50-1125 the 2-month extension fee, the fee for 3 new total claims in excess of 20 and any other fees deemed associated with this filing.

Respectfully submitted,

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